

## Features

- ◆ 100W peak pulse power(8/20 $\mu$ s)
- ◆ Protects two line pairs(four lines)
- ◆ Ultra low leakage: nA level
- ◆ Low operating voltage: 2.8V
- ◆ Low capacitance
- ◆ Ultra low clamping voltage
- ◆ JEDEC SO-8 package
- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 30$ kV  
Contact discharge:  $\pm 30$ kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 10A (8/20 $\mu$ s)
- ◆ RoHS Compliant

## Mechanical Characteristics

- ◆ Package: SO-8
- ◆ Lead Finish: Matte Tin
- ◆ Case Material: "Green" Molding Compound.
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J-STD-020
- ◆ Terminal Connections: See Diagram Below



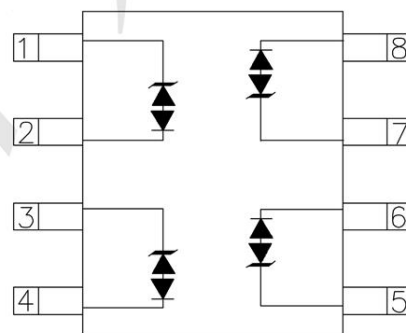
## Applications

- ◆ Base Station
- ◆ Analog Inputs
- ◆ Switch Systems
- ◆ 10/100/1000 Ethernet
- ◆ WAN/LAN Equipment
- ◆ Desktops, Servers, and Notebooks
- ◆ Low Voltage Interfaces

## Ordering Information

| Part Number  | Qty per Reel | Reel Size |
|--------------|--------------|-----------|
| SLVU2.8-4-TP | 2500         | 13Inch    |

## Dimensions and Pin Configuration



Circuit and Pin Schematic

**Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$  unless otherwise specified)**

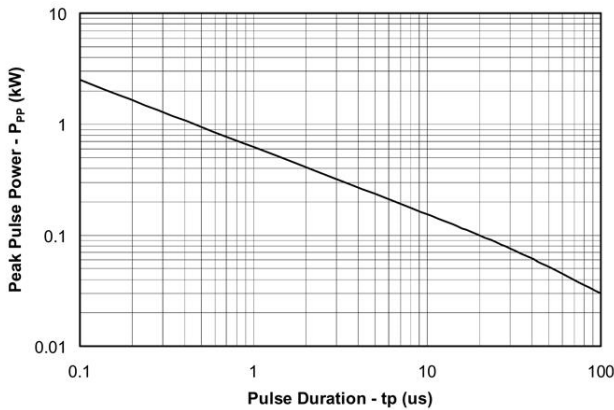
[WWW.SOT23.COM.TW](http://WWW.SOT23.COM.TW)

| Parameter                               | Symbol           | Value       | Unit             |
|---|------------------|-------------|------------------|
| Peak Pulse Power(8/20 $\mu\text{s}$ )   | Ppk              | 100         | W                |
| Peak Pulse Current(8/20 $\mu\text{s}$ ) | I <sub>PP</sub>  | 10          | A                |
| ESD per IEC 61000-4-2 (Air)             | V <sub>ESD</sub> | $\pm 30$    | kV               |
| ESD per IEC 61000-4-2 (Contact)         |                  | $\pm 30$    |                  |
| Operating Temperature Range             | T <sub>J</sub>   | -40 to +125 | $^\circ\text{C}$ |
| Storage Temperature Range               | T <sub>stg</sub> | -55 to +150 | $^\circ\text{C}$ |

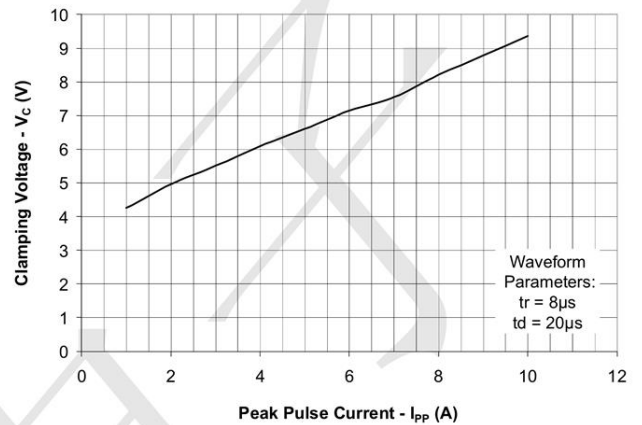
**Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise specified)**

| Parameter                                  | Symbol           | Min | Typ | Max | Unit          | Test Condition  |
|--|------------------|-----|-----|-----|---------------|---|
| Reverse Working Voltage                    | V <sub>RWM</sub> |     |     | 2.8 | V             |   |
| Punch-Through Voltage                      | V <sub>PT</sub>  | 3.5 | 3.8 | 4.3 | V             | I <sub>PT</sub> = 2 $\mu\text{A}$   |
| Snap-Back Voltage                          | V <sub>SB</sub>  | 2.8 |     |     |               | I <sub>SB</sub> = 50mA  |
| Reverse Leakage Current                    | I <sub>R</sub>   |     |     | 1.0 | $\mu\text{A}$ | V <sub>RWM</sub> = 2.8V   |
| Clamping Voltage                           | V <sub>C</sub>   |     |     | 5.5 | V             | I <sub>PP</sub> = 1A (8 x 20 $\mu\text{s}$ pulse)                           |
| Clamping Voltage                           | V <sub>C</sub>   |     |     | 10  | V             | I <sub>PP</sub> = 10A (8 x 20 $\mu\text{s}$ pulse)                          |
| Variation in capacitance with reverse bias |                  |     | 1.3 |     | pF            | Pins 1,8 to 2,7 and pins 3,6 to 4,5<br>V <sub>R</sub> = 0 to 2.8V, f = 1MHz |
| Junction Capacitance                       | C <sub>J</sub>   |     | 4.7 | 6   | pF            | Pins 1,8 to 2,7 and pins 3,6 to 4,5<br>V <sub>R</sub> = 2.8V, f = 1MHz      |

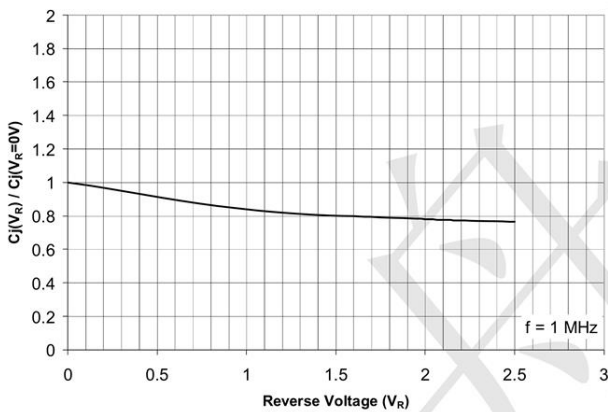
Non-Repetitive Peak Pulse Power vs. Pulse Time



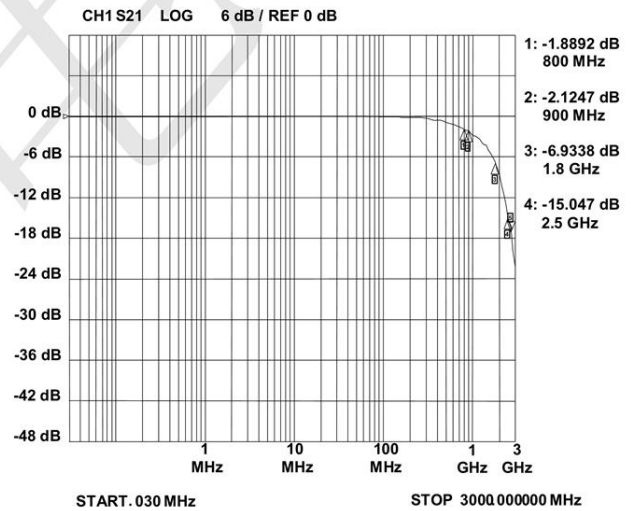
Clamping Voltage vs. Peak Pulse Current



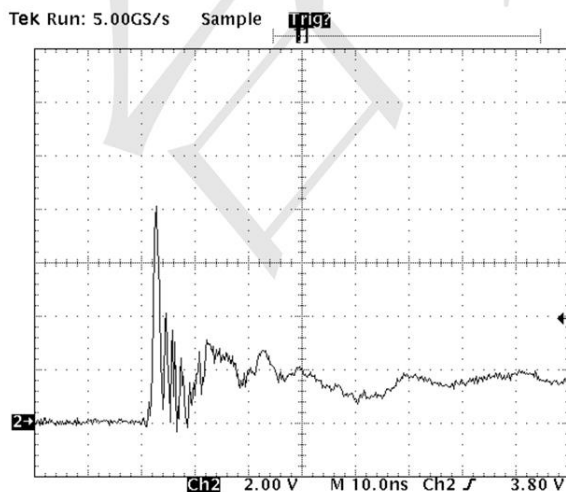
Normalized Junction Capacitance vs. Reverse Voltage



Typical Insertion Loss (S21)

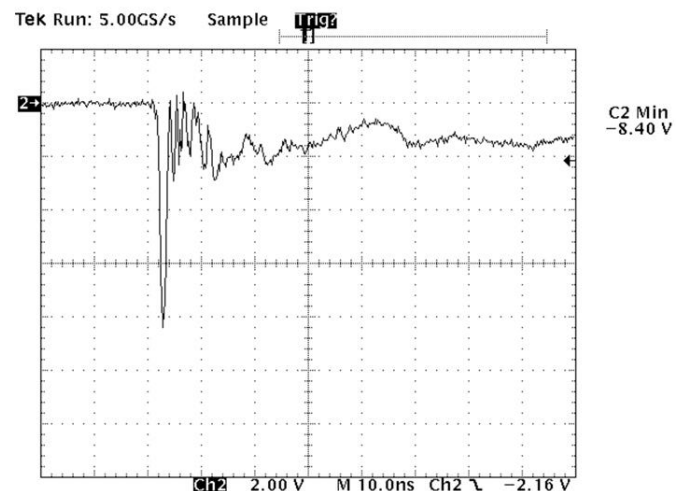


ESD Clamping  
(8kV Contact per IEC 61000-4-2)



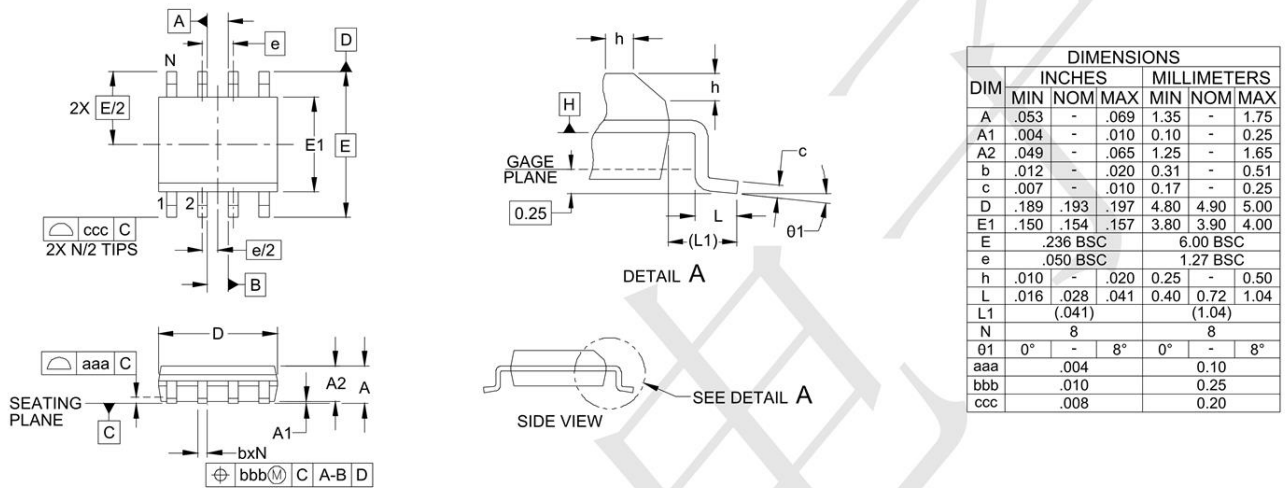
Note: Data is taken with a 10x attenuator

ESD Clamping  
(-8kV Contact per IEC 61000-4-2)



Note: Data is taken with a 10x attenuator

**Outline Drawing - SOP-8**



**Land Pattern - SOP-8**

